# Abandoned Uranium Mine Site Assessment for the Eugenie Site (NM0130)

**FINAL REPORT**

**Prepared For:**

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**April 14, 2010**

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# TABLE OF CONTENTS

## TABLES



## FIGURES



## APPENDICES

# 1.0 INTRODUCTION

INTERA Incorporated (INTERA) has prepared this Abandoned Uranium Mine (AUM) Site Assessment Report for the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) in compliance with the Professional Service Agreement dated November 2, 2009. INTERA visited the Eugenie Mine Site (AUM Site), MMD ID: NM0130, on March 3, 2010.

## 1.1 PREVIOUSLY KNOWN INFORMATION ABOUT THE SITE

The AUM Site is located in the White Signal Mining District and was opened in 1913 as a gold and copper mine (Anderson, 1980). This AUM Site produced a total of 500 pounds of torbernite ore in 1920 and unknown amounts of copper, silver, and gold in 1913-1914 according to McLemore (1983). Uranium is listed as a commodity, however if any was produced the amount is unknown (McLemore, 1983). The AUM Site deposit is characterized as an epithermal quartz-pyrite vein deposits occurring in Precambrian granite (McLemore, 1983, McLemore and Chenoweth, 1989). Epithermal veins are fracture fillings in igneous and metamorphic rocks (McLemore and Chenoweth, 1989).

This AUM Site was included in the Anderson Report, which describes a vertical shaft reported to be 80 feet deep that was filled with water so the depth could not be determined (Anderson, 1980). The Anderson Report also describes a tailings dump south of the shaft (Anderson, 1980).

## 1.2 SITE LOCATION AND DIRECTIONS

The Eugenie Mine Site is located on Bureau of Land Management (BLM) land in the NE 1/4 Section 26, Township 20 South, Range 15 West. This Site is located in Grant County and is approximately 18 miles south-southwest of Silver City in the southern end of the Big Burro Mountain Range (please see Figure 1).

To reach the AUM Site from Albuquerque, drive approximately 170 miles south on Interstate 25. Take Exit 63 towards Hillsboro and get on NM-152. Take NM-152 approximately 65 miles to Santa Clara. At Santa Clara, take US-180 west, turning right on Silver Heights Blvd, for approximately 8 miles to Silver City. In Silver City take a slight left at N Hudson St/NM-90 E. Drive south on NM-90 for approximately 18 miles and then turn left on Separ Road, a maintained dirt road. Drive for about 1 mile on Separ Road, just before the second crossing through the drainage park the car. The AUM Site is located several hundred feet off the road to the northeast.

## 1.3 SITE GEOLOGY

The AUM Site is located on the southern end of the Big Burro Mountains in Grant County, south of Silver City, southwest of Saddle Mountain. The Burro Mountains are a tilted fault-block uplift of Precambrian granite and gneiss in the northwestern-trending transition zone between the Colorado Plateau Province and the Basin and Range Province (Trauger, 1965). The Precambrian core is overlain by Cretaceous and Tertiary sediments and Tertiary volcanic (McLemore, 1983). The White Signal Mining District in the Big Burro Mountains is characterized by hydrothermal

veins filling fractures and faults in the granite and quartz diorite of Precambrian age, as well as in the Tertiary intrusive igneous rock (McLemore, 1983). These fracture and fault veins are characterized as quartz-pyrite veins, quartz-specularite, silver and silver-lead veins, and turquoise veins (McLemore, 1983). The AUM Site is located in a quartz-pyrite vein (McLemore, 1983). The uranium-bearing veins in this area of the Burro Mountains are small and irregular, but the area is considered favorable for uranium deposits (McLemore, 1983).

### 1.4 SITE HYDROGEOLOGY

The AUM Site is along an ephemeral stream that flows southeast to McDonald Draw. McDonald Draw is also an ephemeral stream and flows southeast. McDonald sinks into the ground near the border of Grant and Luna County. No perennial streams are present in the area surrounding the AUM Site.

The AUM Site is located on the western edge of the Mimbres Basin, which extends into Mexico (DBSA, 2005). Groundwater flow in the basin is generally to the south-southeast, towards the U.S.-Mexico border (DBSA, 2005). The basin contains numerous unconfined and confined aquifers, depending on location. The major aquifer is the gravel and sand deposits that characterize the Tertiary and Quaternary alluvium (Heywood, 2002).

### 1.5 REGIONAL TOPOGRAPHY AND TERRAIN

The AUM Site can be found on the White Signal Quadrangle 7.5 minute United States Geological Survey topographic map at an elevation of approximately 5900 feet above mean sea level (please see Figure 2). The Site is on the southern-most end of the Big Burro Mountains. The AUM Site is located between the Three Sisters peaks (~6300 feet above mean sea level) to the southwest and Saddle Mountain (~6300 feet above mean sea level) to the northeast. The broader region around the AUM Site consists of fault-block ranges separated by down-dropped valleys. In general the area is steep and hilly. Figure 3 shows an aerial photograph of the terrain surrounding the AUM Site.

## 2.0 MINE FEATURES

The mine features described below are based on the features provided to INTERA by MMD in the GIS Data Dictionary (MMD, 2009). INTERA marked the locations of the AUM Site features using a Trimble Global Positioning System (GPS) and entered details about the features into the GPS using the MMD data dictionary. The AUM Site consists of two open cuts, four piles, eight pits, and one fence. A mine claim marker was found offsite. Please see the Photo Log in Appendix A for photos, Table 1 for a list of all AUM Site features, and Figures 4 for the locations of the AUM Site features. Note that the scale differs between Figure 4a (aerial photo) and 4b (ownership map) due to resolution on aerial photographs.

### 2.1 MINE SHAFTS, ADITS, AND DECLINES

No mine shafts, adits or declines were identified at the AUM Site.

### 2.2 MINING AND EXPLORATION PITS AND OPEN CUTS

Two open cuts and eight exploration pits were identified at the AUM Site. Pits 6, 7, and 8 were found in DistPly-2, approximately 200 to 300 feet northeast of the access road. Exploration pits 4 and 5 are located another 100 to 150 feet up the hill and pits 1, 2, and 3 are another 200 to the east (see Figure 4).

### 2.3 WASTE AND ORE PILES AND DISTURBANCES

Four waste piles were found onsite. Two waste piles (PileRidge-1 and PileRidge-2) are associated with the pits at the top of the hill (Pit-1, Pit-2 and Pit-3). The other two waste piles (PilePly-1 and PilePly-2) are associated with the pits toward the base of the hill (Pit-6, Pit-7 and Pit-8). The two disturbances (DistPly-1 and DistPly-2) are the areas around the pits and piles that were altered, flattened for the exploration and mining work. DistPly-1 is associated with the features at the top of the hill (Pit-1 through 3 and PileRidge-1 and 2). DistPly-2 is associated with the features at the base of the hill, closest to the road (Pit-6 through 8 and PilePly-1 and 2). A fence (GateLin-1) separates the DistPly-2 and associated features from the features farther up the hill.

### 2.4 MINING RELATED BUILDINGS AND FOUNDATIONS

No mining related buildings and foundations were evident at the AUM Site.

### 2.5 OTHER MINE FEATURES

An access road, Separ Road (Access-1), runs southwest of the AUM Site. A mine claim marker (Claim-1) was identified approximately .25 miles northeast of the AUM Site. The claim marker was identified as “W Claims, LM #74.” Other prospect and mining sites were present in the area surrounding this AUM Site.

### 2.6 BOREHOLES

No boreholes were evident at the AUM Site.

### 2.7 RECLAMATION ACTIVITIES

No evidence of reclamation was evident at the AUM Site.

## 3.0 ARCHEOLOGICAL SITES

No apparent archeological sites were identified at or near the AUM Site.

## 4.0 SITE GAMMA RADIATION READINGS

The background gamma radiation readings at the AUM Site were measured approximately 200 feet from the southern end of the site. The background gamma readings were measured at 25

microroentgens per hour (µR/hr) at the ground surface and 24 µR/hr at 4 feet above the ground surface. Please see Table 2 for all of the gamma radiation readings taken at the AUM Site.

The highest gamma radiation readings at the AUM Site were found in the vicinity of DistPly-2 at the base of the hill. Exploration Pit-8 had gamma radiation readings of 150 µR/hr at the ground surface and 40 µR/hr at 4 feet above the ground surface (Rad-14). Another gamma radiation reading (Rad-16) taken on PilePly-2 was measured at 110 µR/hr at the ground surface and 70 µR/hr at 4 feet above the ground surface. The highest reading at the top of the hill (DistPly-1) were measured in Pit-1 and measured 96 µR/hr at the ground surface and 37 µR/hr at 4 feet above the ground surface. Please see Table 2 for details.

# 5.0 CURRENT LAND USES

## 5.1 HUMAN ACTIVITY AND RECREATIONAL SITE USE

Evidence of ranching was evident at and surrounding the AUM Site. This evidence includes cow tracks, fences, and cattle guards. The AUM Site is located within a few hundred feet of a public road, Separ Road (Access-1). Extensive evidence of past mining and exploration activity is evident in the area surrounding the AUM Site.

## 5.2 NEARBY RESIDENTIAL, COMMERCIAL AND INDUSTRIAL STRUCTURES

At least fourteen residential or commercial structures are within a 1-mile radius of the AUM Site. Please see Figure 3.

## 5.3 NEARBY DOMESTIC WELLS

There are fifteen domestic wells, two stock wells, one public well, and one unidentified use well located within a 1-mile radius of the AUM Site. The unidentified well, M-08284, is a private well drilled in 1996 to a depth of 265 feet and a depth to water of 60 feet. The 15 domestic wells are all private and 14 of the 15 were drilled sometime between 1993 and 2004. The average depth of these private domestic wells is approximately 300 feet and the average depth to water is approximately 70 feet. One private domestic well, M-05400, was drilled in 1900 to a depth of 200 feet and has a depth to water of 140 feet. The two stock wells are both privately owned and have no other information available. The public well, M-08826, is owned by a construction firm in Las Cruces but no other information is available.

## 5.4 EVIDENCE OF GRAZING OR AGRICULTURE

Fences, cattle guards, and cattle tracks in the area attest to active ranching activity. Cattle were seen along the access road to the AUM Site.

## 5.5 EVIDENCE OF WILDLIFE

A retail hawk, a cottontail rabbit, and western bluebirds were identified at, or near, the AUM Site. Deer tracks were also identified on the AUM Site.

# 6.0 VEGETATION

The Eugenie site is located in the Desert Grassland Ecotone. The woody species identified at the AUM Site included Emory Oak, Rocky Mountain Juniper, Common Sotol, cholla, prickly pear and chamise. The grass species observed included Hairy Grama and Beargrass. No forbs were identified at the AUM Site. No evidence of noxious weeds was observed for the AUM Site.

# 7.0 POTENTIAL OFFSITE IMPACTS

## 7.1 EROSION

No erosion was associated with mine features at the AUM Site.

## 7.2 ENVIRONMENTAL IMPACTS

There is no evidence of soil staining from chemicals potentially brought to the AUM Site.

# 8.0 REFERENCES

Anderson, Orin J., 1980. Abandoned or Inactive Uranium Mines in New Mexico. New Mexico Bureau of Mines and Mineral Resources Open File Report 148.

Daniel B. Stephens & Associates, Inc (DBSA), 2005. Southwest New Mexico Regional Water Plan. Prepared for: Southwest New Mexico Regional Water Plan Steering Committee, City of Deming, New Mexico.

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McLemore, Virginia T., 1983. Uranium and Thorium Occurrences in New Mexico: Distribution, Geology, Production, and Resources, with Selected Bibliography. New Mexico Bureau of Mines and Mineral Resources, Open-file Report OF-183.

Mining and Minerals Division (MMD), 2009. Mine Feature Data Dictionary.

New Mexico Office of the State Engineer (NMOSE), 2008. Wells and Surface Diversions in New Mexico. WATERS_PODS_may08.shapfile. OSE Waters Database.

Trauger, Frederick D., 1965. Geologic Structure Pattern of Grant County, New Mexico. New Mexico Geological Society Fall Field Conference Guidebook – 16 Southwestern New Mexico II, eds. J. Paul Fitzsimmons and Christina L. Balk, pp. 184-187.

# TABLES

# Table 1
# Site Features

## Eugenie-NM0130
## Abandoned Uranium Mine Assessments

| Feature Name | On Site? | Feature Type | Associated Feature | Material | Height or Depth (ft) | Width or Diameter (ft) | Length (ft) | Open | Collapsed | Closure Type | Associated Photo | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Access-1 | No | Dirt maintained | -- | -- | -- | -- | -- | -- | -- | -- | -- | Separ Road |
| Claim-1 | No | Sign | -- | -- | -- | -- | -- | -- | -- | -- | NM0130_047 | "W Claims, LM #74" |
| CutLn-1 | Yes | -- | -- | -- | 4 | 12 | 18 | Yes | No | -- | NM0130_027 | -- |
| CutLn-2 | Yes | -- | -- | -- | 3 | 7 | 6 | Yes | No | -- | NM0130_032 | -- |
| DistPly-1 | Yes | Other | Pit-1-3 and PileRidge-1-2 | -- | -- | -- | -- | -- | -- | -- | NM0130_001 NM0130_013 | Highest area assessed |
| DistPly-2 | Yes | Other | Pit-6-8 and PilePly-1-2 and CutLn-2 | -- | -- | 20 | 35 | -- | -- | -- | NM0130_036 NM0130_041 | Bottom of hill |
| GateLn-1 | Yes | Wire gate | -- | -- | -- | -- | -- | -- | -- | -- | NM0130_031 | Barbed wire fence and gate |
| PilePly-1 | Yes | Waste | Pit-6 | Rock | 5 | 25 | 50 | -- | -- | -- | NM0130_030 | -- |
| PilePly-2 | Yes | Waste | Cutln-2 and Pit-7 | Rock | 5 | 20 | 25 | -- | -- | -- | NM0130_039 NM0130-040 | -- |
| Pileridge-1 | Yes | Waste | DistPly-1 and Pit-1 | Rock | 3 | 15 | 35 | -- | -- | -- | NM0130_005 NM0130_006 NM0130_007 | -- |
| Pileridge-2 | Yes | Waste | Pit-2 and Pit-3 | Rock | 6 | 20 | 65 | -- | -- | -- | NM0130_008 NM0130_009 NM0130_010 | -- |
| Pit-1 | Yes | Exploration | -- | -- | 4 | 8 | 15 | Yes | No | -- | NM0130_002 | -- |
| Pit-2 | Yes | Exploration | -- | -- | 6 | 25 | 25 | Yes | No | -- | NM0130_003 NM0130_004 NM0130_013 | -- |

# Table 1
# Site Features

## Eugenie-NM0130
## Abandoned Uranium Mine Assessments

| Feature Name | On Site? | Feature Type | Associated Feature | Material | Height or Depth (ft) | Width or Diameter (ft) | Length (ft) | Open | Collapsed | Closure Type | Associated Photo | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pit-3 | Yes | Exploration | -- | -- | 3 | 6 | 8 | Yes | No | -- | NM0130_011<br>NM0130_012<br>NM0130_013 | -- |
| Pit-4 | Yes | Exploration | -- | -- | 4 | 10 | 15 | Yes | No | -- | NM0130_025 | -- |
| Pit-5 | Yes | Exploration | -- | -- | 2 | 10 | 12 | Yes | No | -- | NM0130_026 | -- |
| Pit-6 | Yes | Exploration | -- | -- | 7 | 8 | 15 | Yes | No | -- | NM0130_028<br>NM0130_029 | -- |
| Pit-7 | Yes | Exploration | -- | -- | 3 | 6 | 10 | Yes | No | -- | NM0130_033<br>NM0130_034<br>NM0130_035<br>NM0130_041 | -- |
| Pit-8 | Yes | Exploration | -- | -- | 5 | 6 | 15 | Yes | No | -- | NM0130_037<br>NM0130_038 | -- |

**Notes:**

-- designates no information

# Table 2
# Gamma Radiation Survey Results

## Eugenie-NM0130
## Abandoned Uranium Mine Assessments

| Reading ID | Asssociated Feature | Reading at 0ft Above Ground (µR/hr) | Reading at 4ft Above Ground (µR/hr) | Associated Photo |
|---|---|---|---|---|
| Rad-1 | PitPly-1 | 96 | 37 | -- |
| Rad-2 | Pit-2 | 45 | 39 | NM0130_003 |
| Rad-3 | Pileridge-1 | 40 | 33 | NM0130_005-007 |
| Rad-4 | Pileridge-2 | 43 | 32 | -- |
| Rad-5 | Pit-3 | 44 | 32 | -- |
| Rad-6 | Pit-4 | 30 | 26 | -- |
| Rad-7 | Pit-5 | 30 | 26 | -- |
| Rad-8 | CutIn-1 | 32 | 26 | -- |
| Rad-9 | Pit-6 | 38 | 30 | -- |
| Rad-10 | PitPly-1 | 30 | 28 | -- |
| Rad-11 | CutIn-2 | 41 | 31 | -- |
| Rad-12 | Pit-7 | 70 | 41 | -- |
| Rad-13 | PhotoPt-6 | 40 | 32 | NM0130_036 |
| Rad-14 | Pit-8 | 150 | 40 | -- |
| Rad-15 | DistPly-2 | 60 | 43 | -- |
| Rad-16 | PilePly-2 | 110 | 70 | -- |
| Rad-17 | RadBack-2 | 30 | 25 | NM0130_046 |
| RadBack-1 | -- | 25 | 24 | -- |

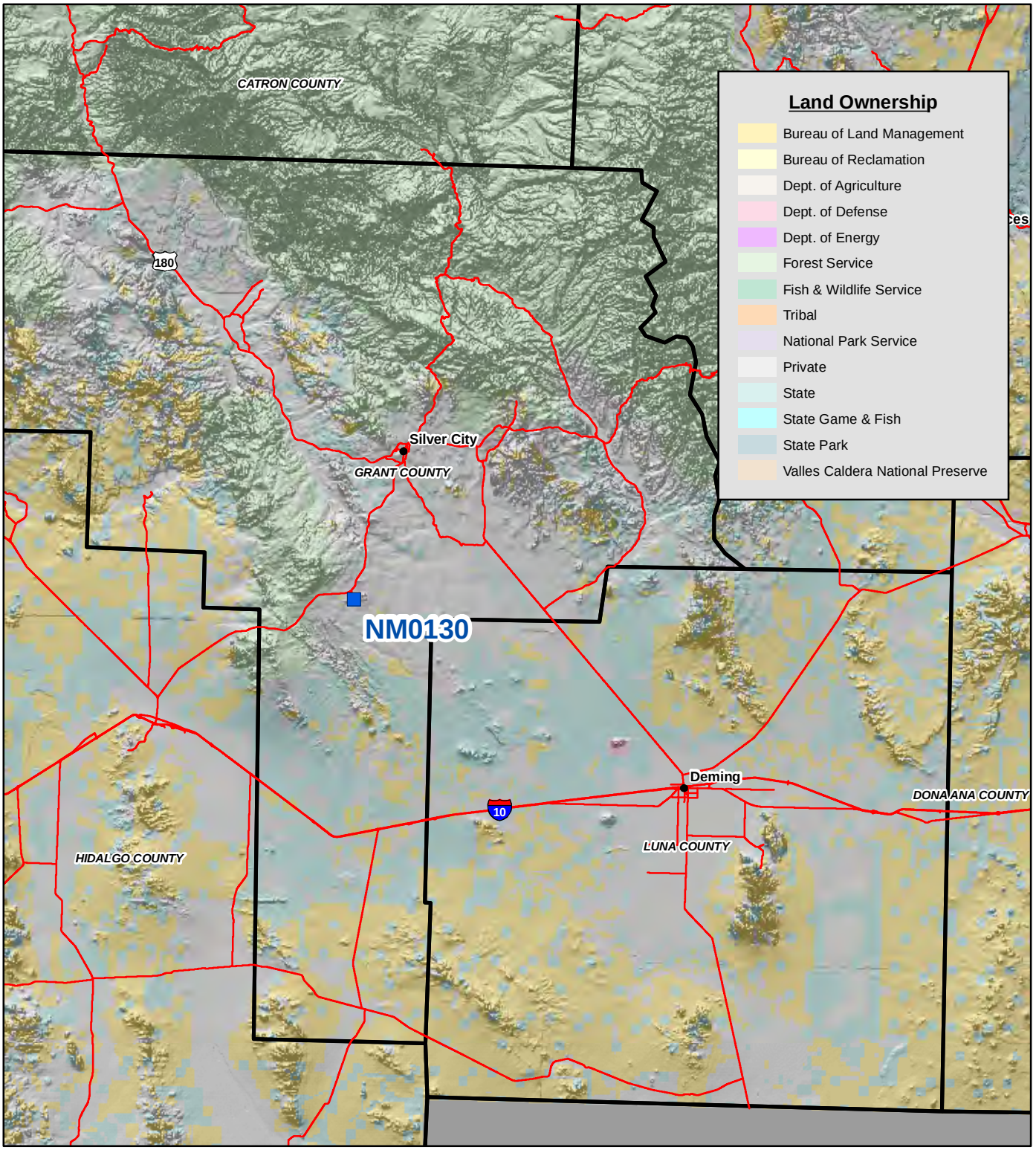
**Notes:**

All gamma readings at this site taken by Ludlum 192 µR/Ratemeter

µR/hr=microroetgens per hour

-- designates no information

# FIGURES

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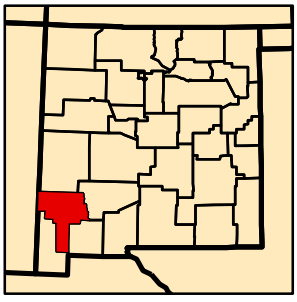
0 7.5 15 30
Miles

NORTH



## Legend

- AUM Location
- Road
- County Boundary

**Figure 1**
**Site Location Map**
**NM0130-Eugenie**
Abandoned Uranium Mine Assessment

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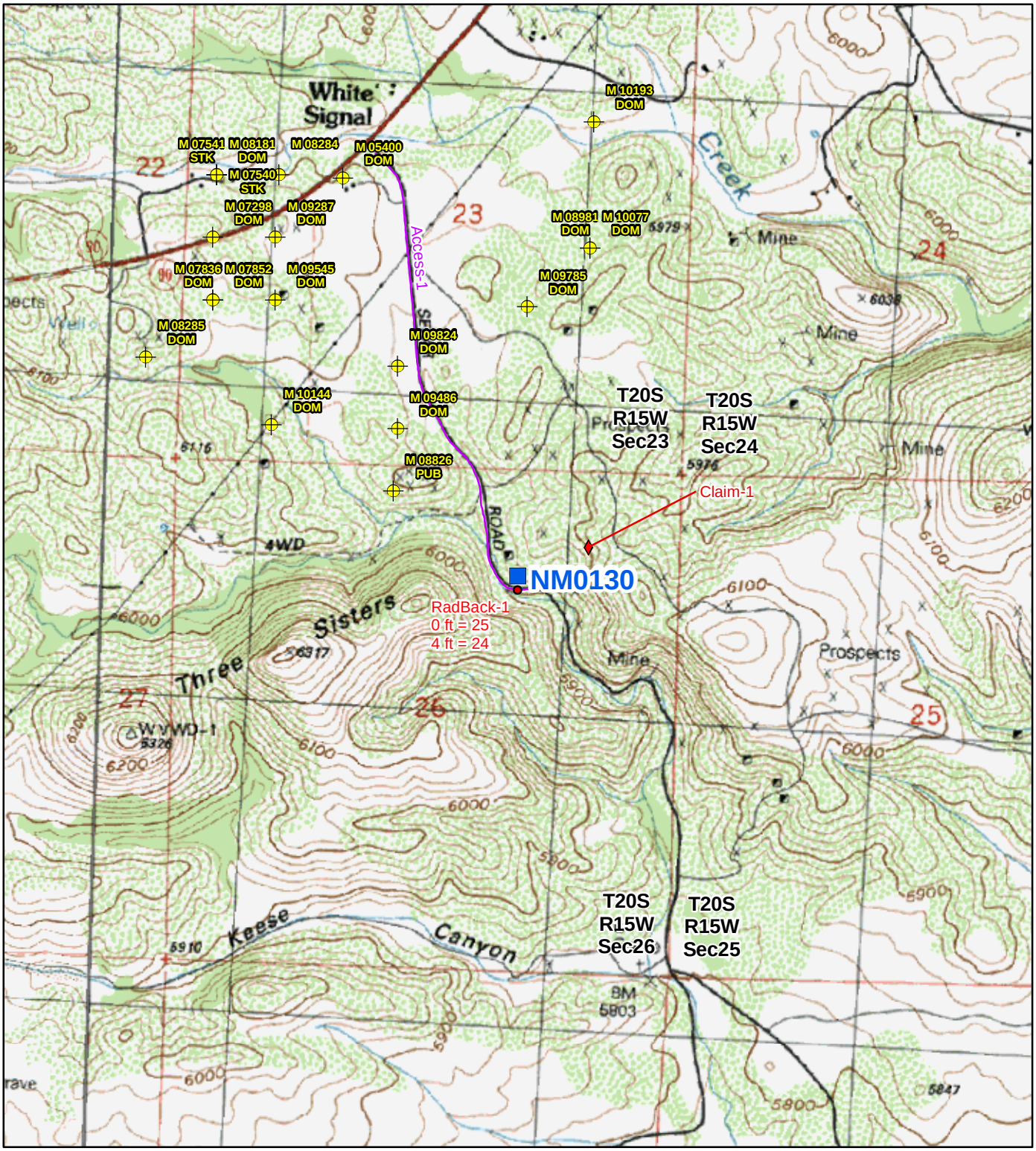


Map Source(s):
U.S. Geological Survey 7.5-Minute Topographic Map
-Burro Peak, 1992
-White Signal, 1992

0 750 1,500 3,000
Feet

NORTH

## Legend

- AUM Location
- Radiation Readings (µR/hr)
- Claim Marker
- Well Within 1 Mile of Site
- Access Route

**Figure 2**
**Topographic Map**
**NM0130-Eugenie**
Abandoned Uranium Mine Assessment

INTERA

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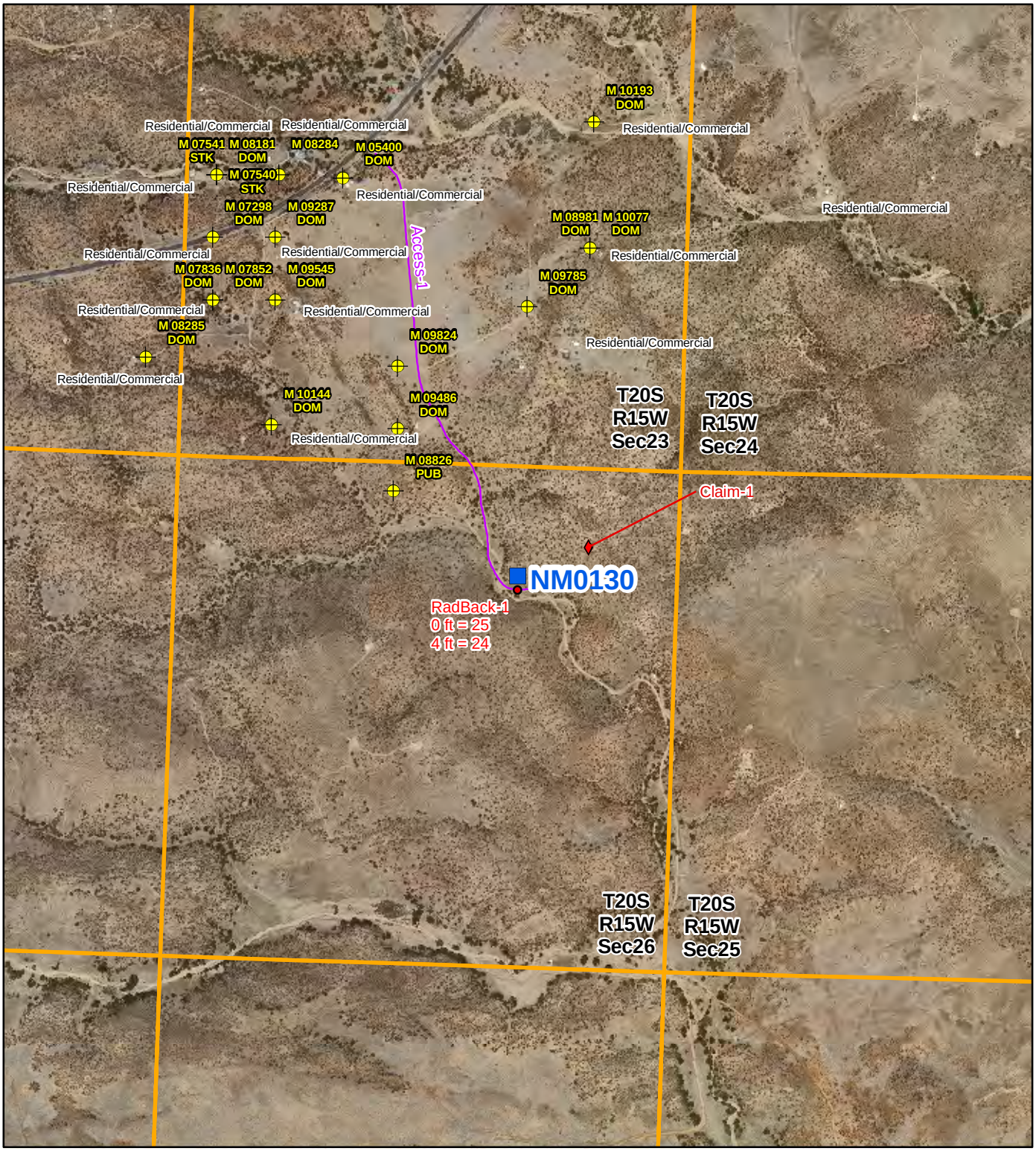



Map Source(s):
U.S. Geological Survey 7.5-Minute
DOQQ County Mosaic
-Grant County, 2009

0 750 1,500 3,000
Feet

NORTH

## Legend

- AUM Location
- Radiation Readings (µR/hr)
- Claim Marker
- Well Within 1 Mile of Site
- Access Route
- Section Boundary

**Figure 3**
**Aerial Photo**
**NM0130-Eugenie**
Abandoned Uranium Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0130-Eugenie\GIS\Maps\Aerial_Map_EugenieCP.mxd 04/13/2010

Access-1

Rad-6
0 ft = 30
4 ft = 26

Pit-4

Rad-5
0 ft = 44
4 ft = 32

Pit-3

Pit-2

Photo-13

Rad-2
0 ft = 45
4 ft = 39

Rad-1
0 ft = 96
4 ft = 37

DistPly-1

pileridge-2

Pit-1

Photo-1

pileridge-1

Rad-4
0 ft = 43
4 ft = 32

Rad-3
0 ft = 40
4 ft = 33

Rad-8
0 ft = 32
4 ft = 26

Rad-11
0 ft = 41
4 ft = 31

Pit-5

Rad-10
0 ft = 30
4 ft = 28

Rad-16
0 ft = 110
4 ft = 70

Rad-9
0 ft = 38
4 ft = 30

Rad-13
0 ft = 40
4 ft = 32

Photo-29

Photo-36

DistPly-2

Rad-7
0 ft = 30
4 ft = 26

Rad-15
0 ft = 60
4 ft = 43

Photo-41

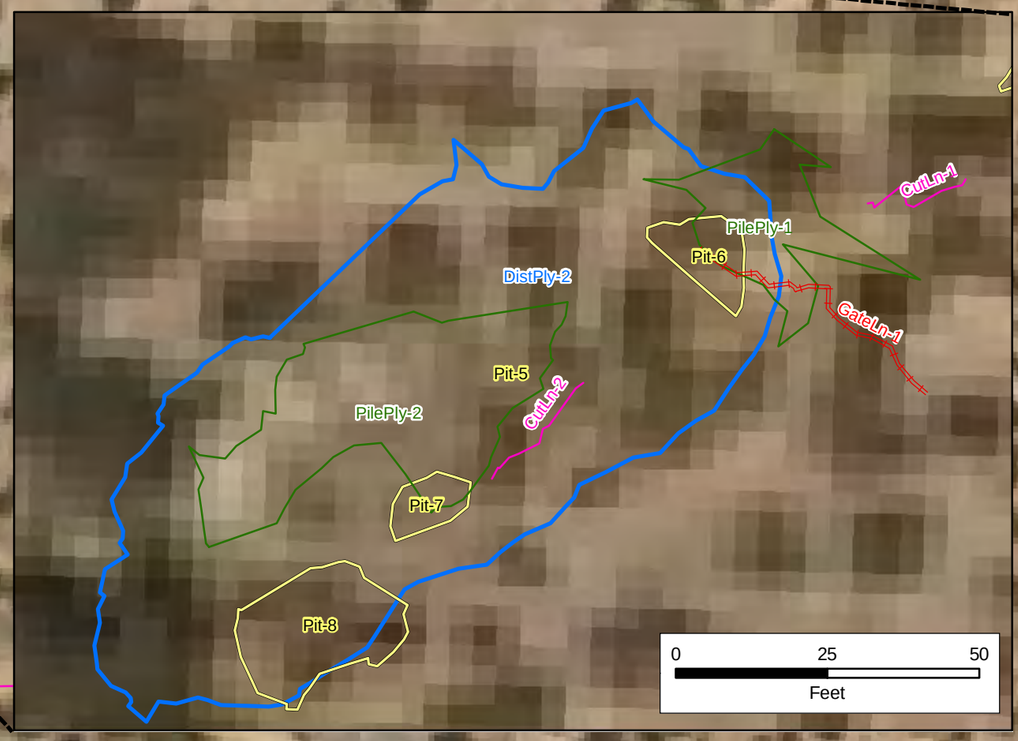
Photo-35

Photo-34

Rad-14
0 ft = 150
4 ft = 40

Rad-12
0 ft = 70
4 ft = 41

Rad-17
0 ft = 30
4 ft = 25




## Legend

- Radiation Readings (µR/hr)
- Photo Location
- Access Route
- Pile Ridge
- Open Cut
- Gate
- Pile Boundary
- Pit Boundary
- Other Disturbance Area

0 40 80 160
Feet

NORTH

Map Source(s):
U.S. Geological Survey 7.5-Minute
DOQQ County Mosaic
-Grant County, 2009

**Figure 4a**
**Site Map on**
**Aerial Photo**
**NM0130-Eugenie**
Abandoned Uranium
Mine Assessment

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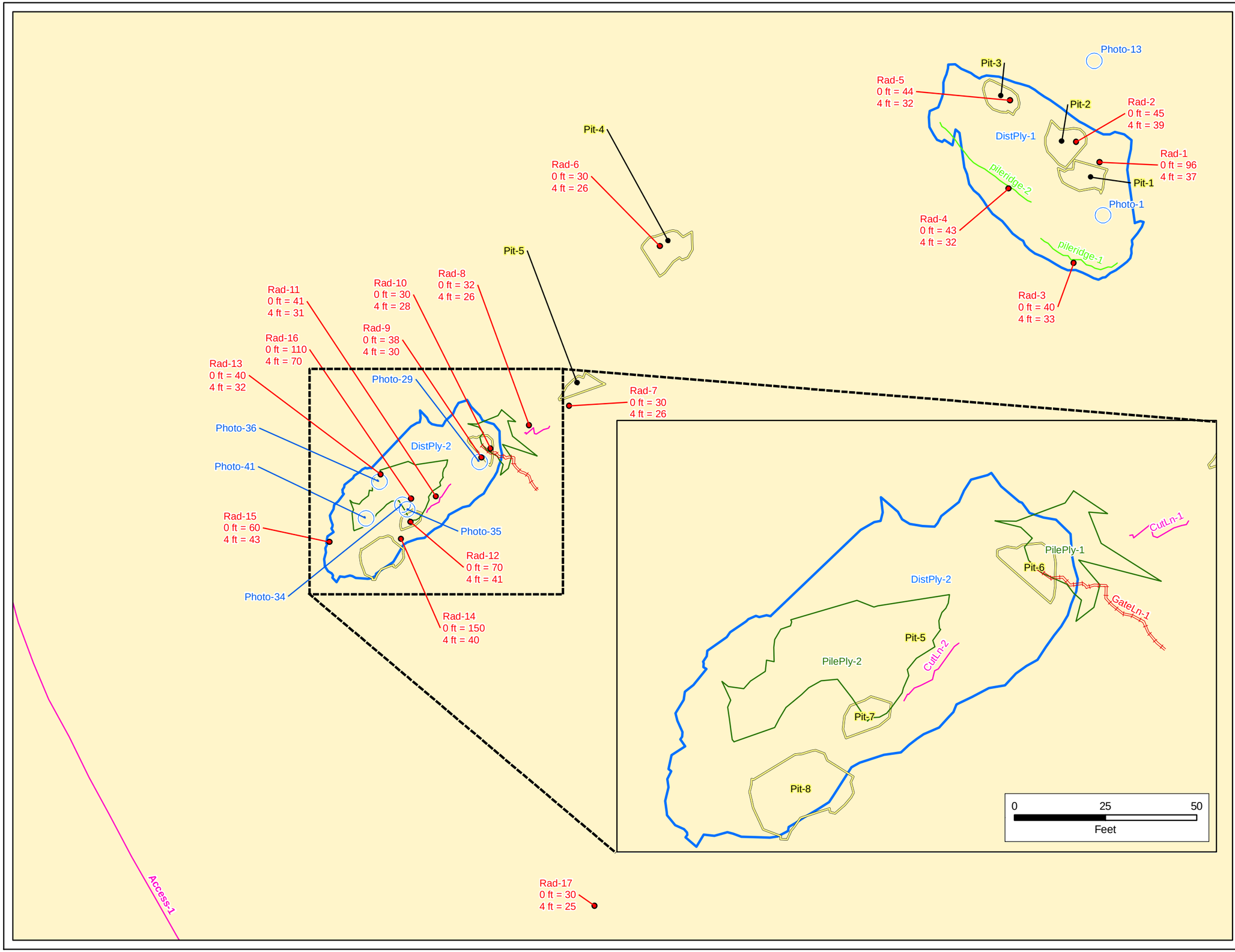



Map Source(s):
Ownership - BLM, 2008

**Figure 4b**
**Site Map with Surface Ownership**
**NM0130-Eugenie**
Abandoned Uranium Mine Assessment

File: S:\Projects\EMMD-001_Abandoned Uranium Mine Assessment\Sites\NM0130-Eugenie\GIS\Maps\CloseUp_Map_Ownership_EugenieCP.mxd 04/08/2010

# APPENDIX A

# PHOTO LOG

Note: Gaps in the numbering sequence of the photos is the result of removing photos not suitable for the report. A full set of photos is provided in the electronic deliverable.


Photo 1-Site name at location, looking west (PhotoPt-1).

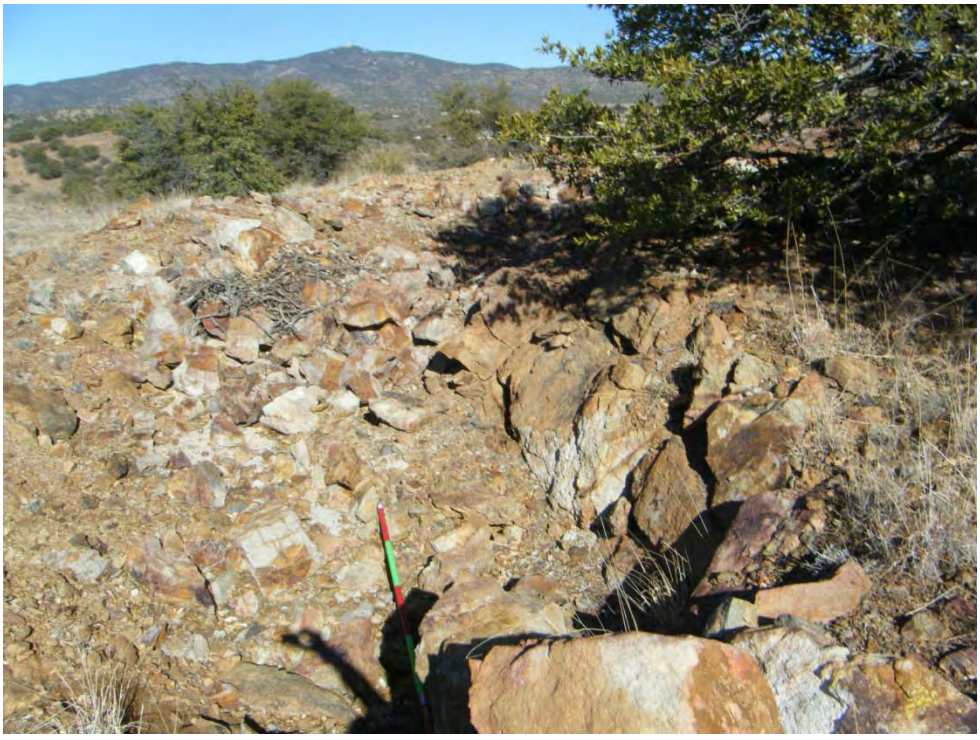


Photo 2-Looking west at Pit-1.

Photo 3-Looking west at Pit-2.

Photo 4-Looking south at Pit-2.

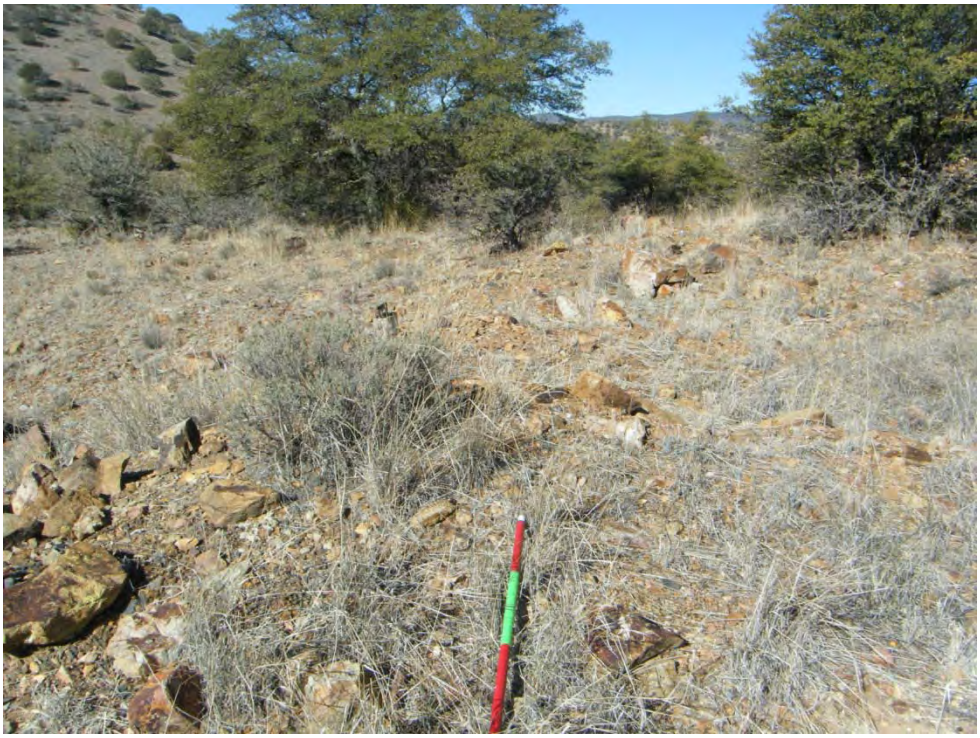


Photo 5-Looking west at Pileridge-1.

Photo 6-Looking south at Pileridge-1.

Photo 7-Looking north at Pileridge-1.

Photo 8-Looking west at Pileridge-2.

Photo 9-Looking south at Pileridge-2.

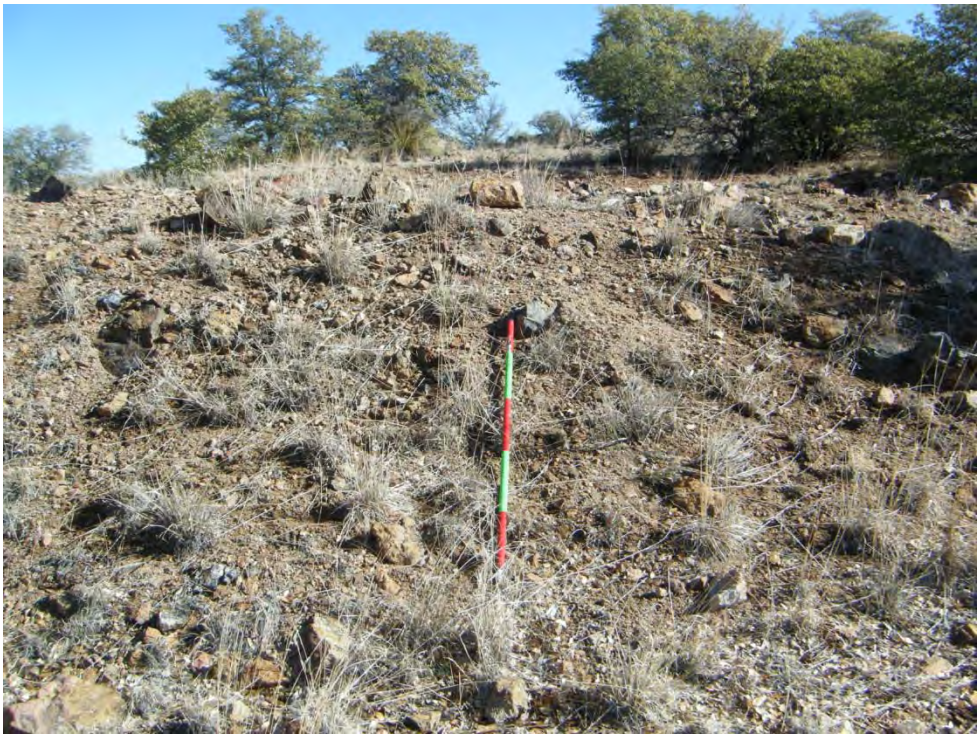


Photo 10-Looking north at Pileridge-2.

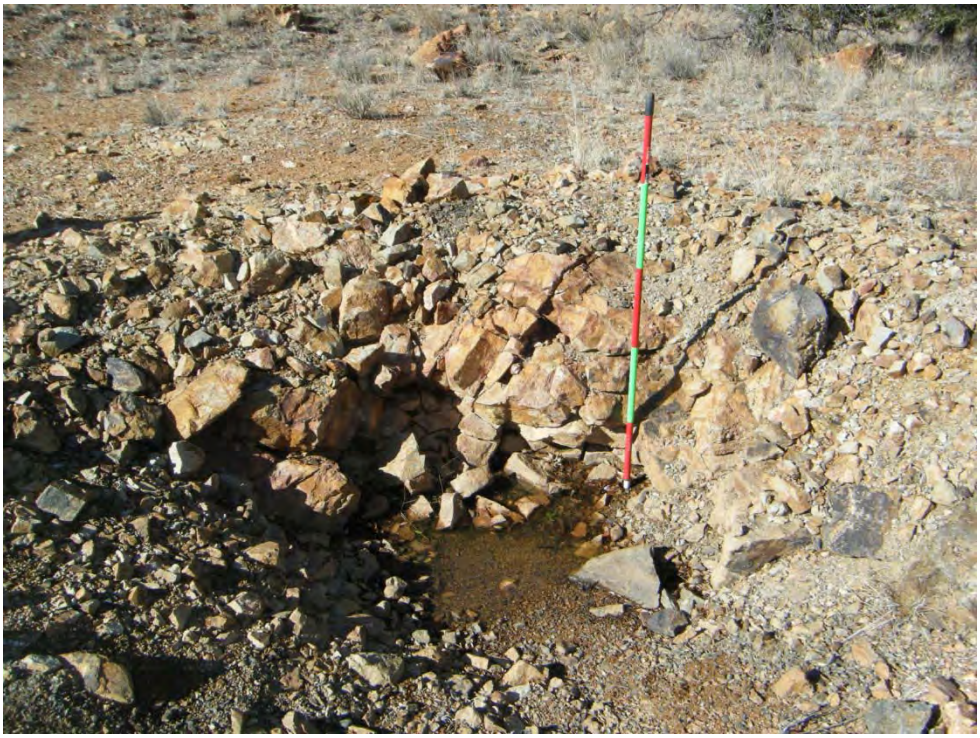


Photo 11-Looking south at Pit-3.

Photo 12-Looking south at Pit-3.

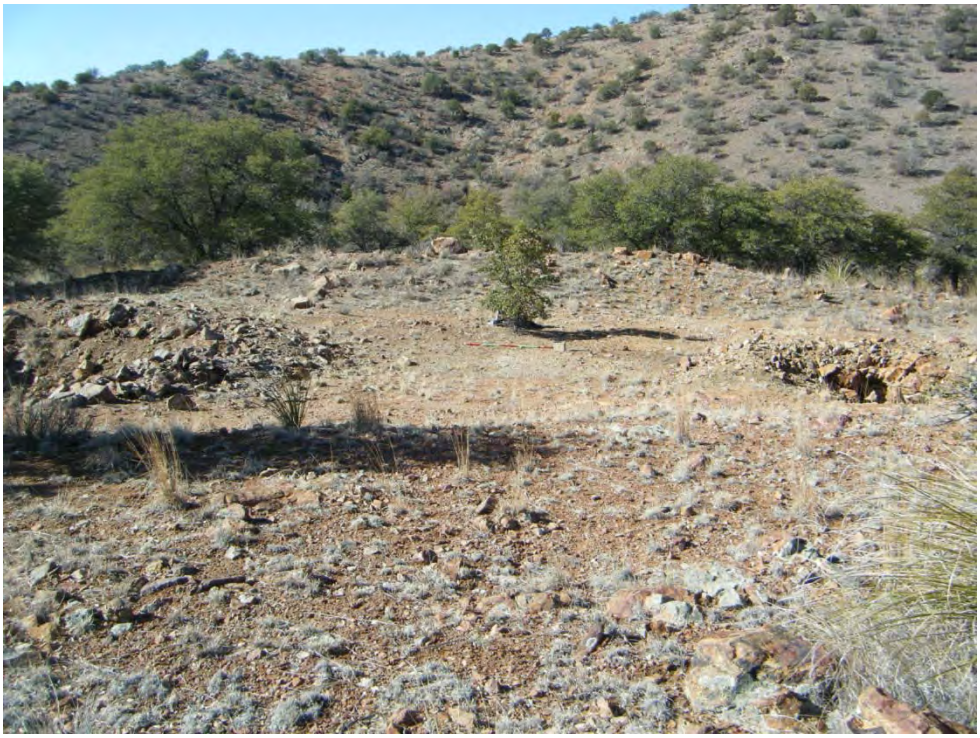


Photo 13-Looking south at DistPly-1, Pit-2 is on the left and Pit-3 is on the right.

Photo 14-Emory Oak at the AUM Site.

Photo 21-Beargrass at the AUM Site.

Photo 23-Common Sotol at the AUM Site.

Photo 25-Looking south at Pit-4.

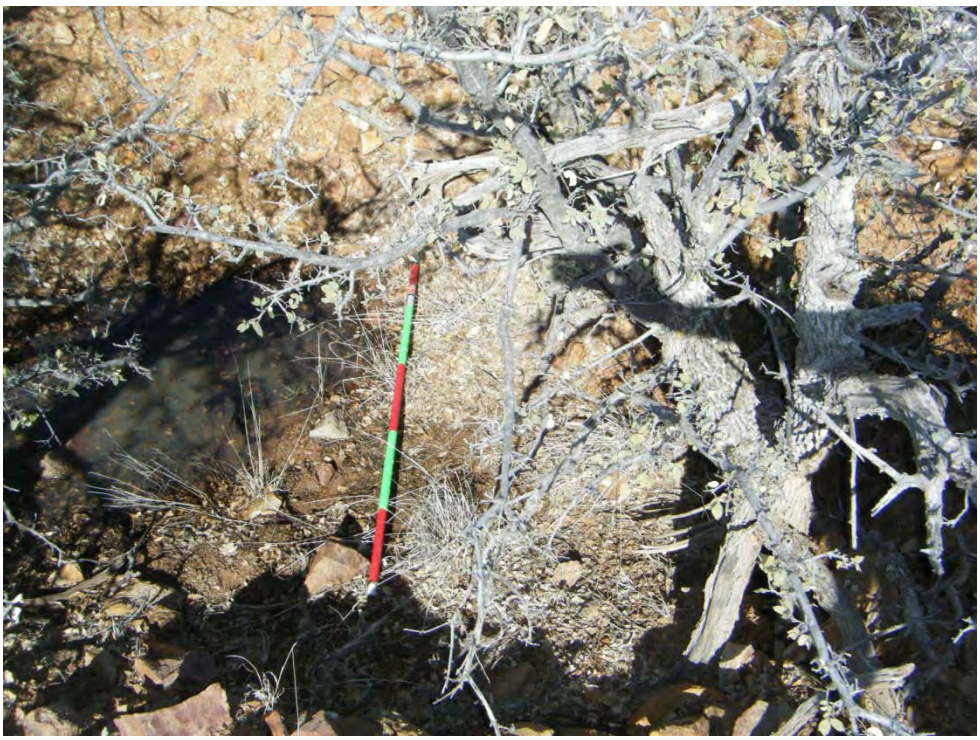


Photo 26-Looking west at Pit-5.

Photo 27-Looking north at Cutln-1.

Photo 28-Looking south at Pit-6.


Photo 29-Metal tag in Pit-6, “73225” (PhotoPt-3).

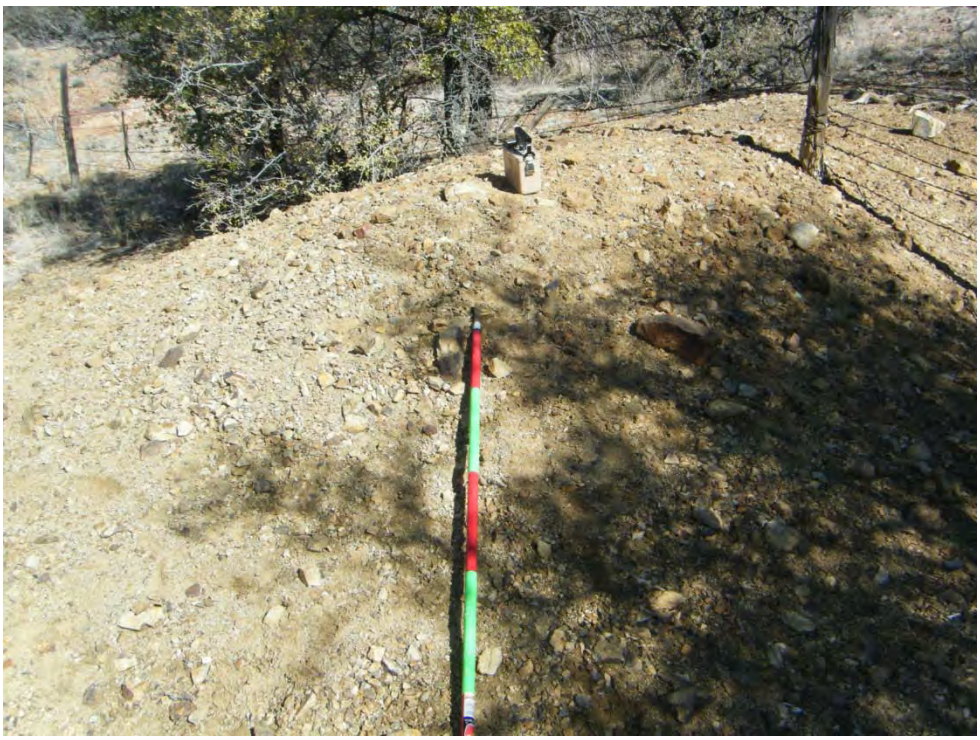


Photo 30- Looking northwest at PilePly-1.

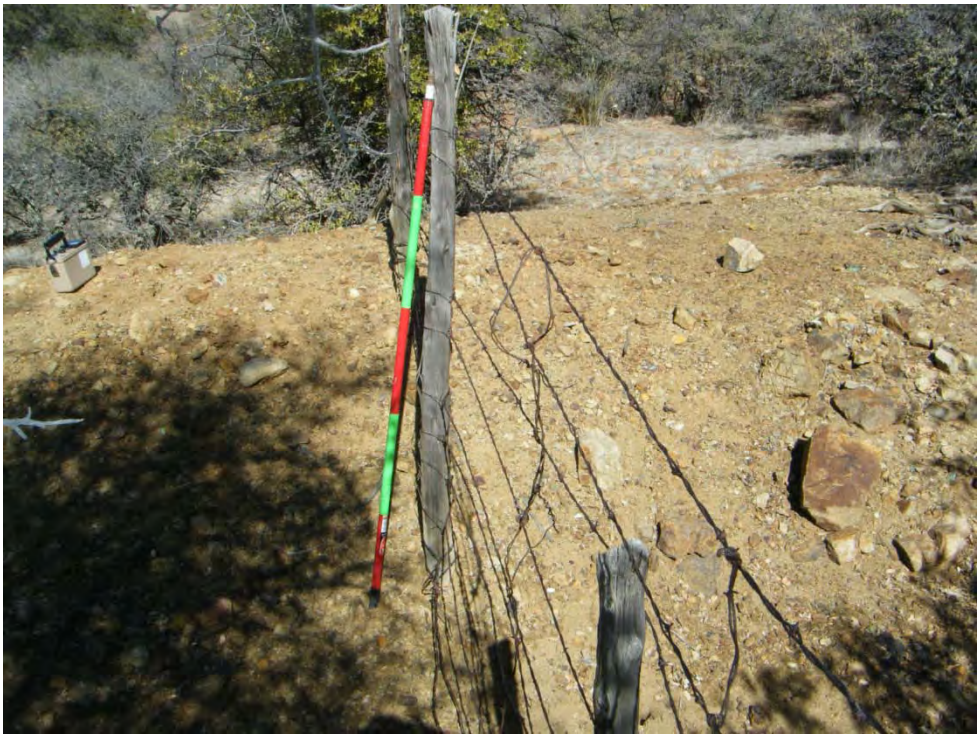


Photo 31-Looking west along fence (GateLn-1).

Photo 32-Looking north at CutLn-2.

Photo 33-Looking south at Pit-7.


Photo 34-Metal tag in Pit-7, “73224” (PhotoPt-4).

Photo 35-Metal tag in Pit-7, “41481” (PhotoPt-5).

Photo 36-Metal tag attached to loose rock on western edge of DistPly-2, “41480” (PhotoPt-6).

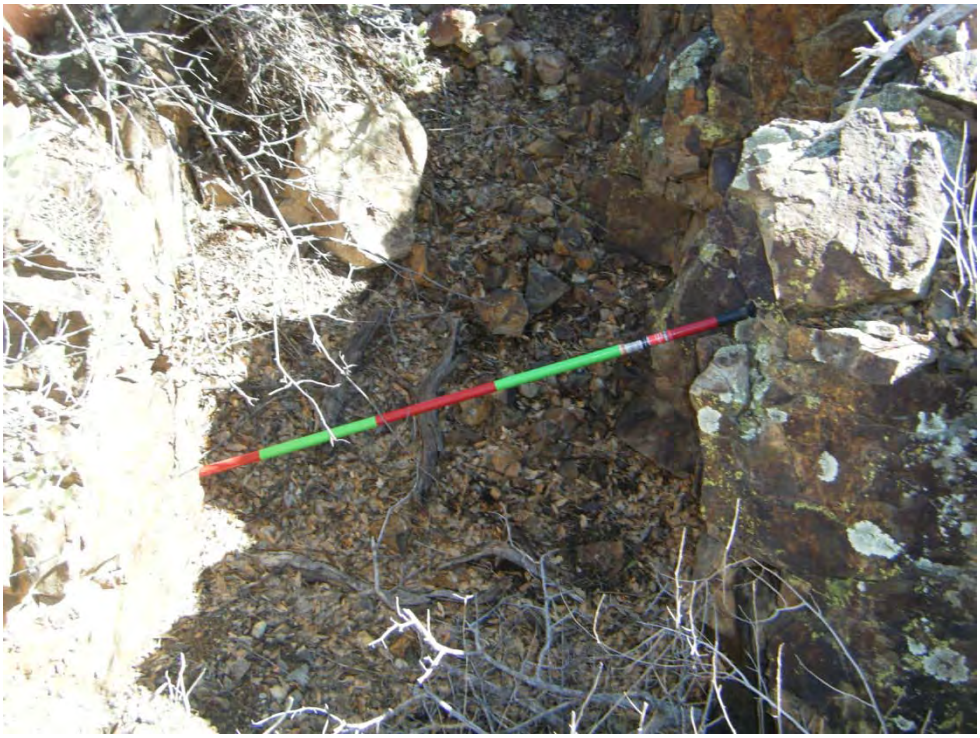


Photo 37-Looking north at Pit-8.

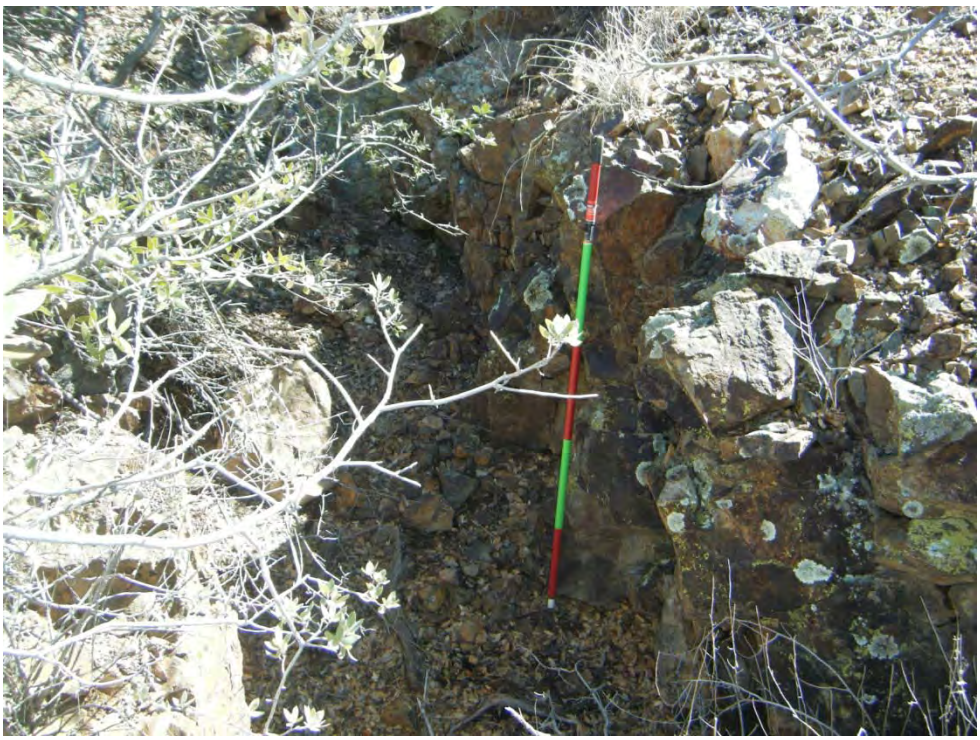


Photo 38-Looking northeast at Pit-8.

Photo 39-Looking north at PilePly-2.

Photo 40-Looking south at PilePly-2.

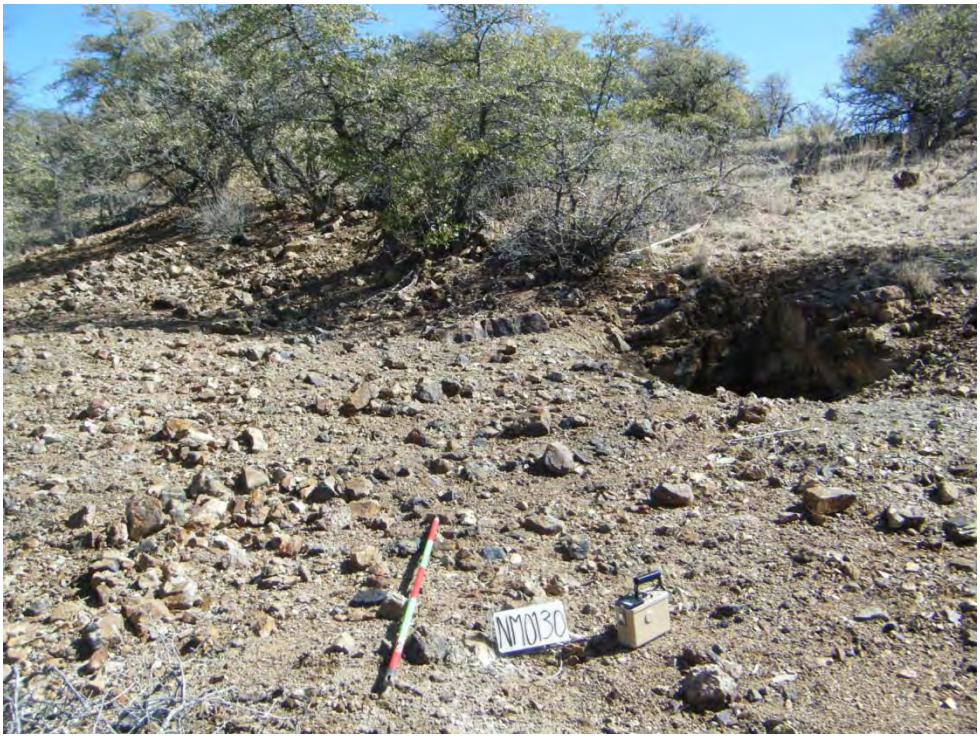



Photo 41-Looking northeast at site name on DistPly-2, Pit-7 is on the right.

Photo 45-Emory Oak and Rocky Mountain Juniper at the AUM Site.

Photo 46-Looking north at the given AUM location, no evidence of mine features.


Photo 47-Looking west at mine claim, east of AUM Site location, “W Claim LM #74.”

# APPENDIX B

# FIELD NOTES

3/03/10 ALT Abandoned Uranium Mines:

Site Name: NM0130, Eugenie

Objective: Site Assessment

Personnel: Annelia Tinklenberg
Eileen Romesser

Equipment: Rental truck, Trimbel GeoXM (SN: 4948447271, 2008 series); Ludlum 192 (SN: 234149); Fuji Film digital camera (No. 80839493); backup Garmin GPS; cell phone amplifier; field laptop

800 At site, packing up to find the location.
Rad Background - at truck 0m - 25 mR/h; 1m - 24 mR/h
840 Found claims along hillslope - nothing at shapefile location.

DistPly-1 - Highest most disturbed area assessed on slope. 3 pits, 2 pile ridges
Photo 1 - Location of site with site name looking west, photopt 1

Pit-1 - 4' deep, 15' long, 8' wide
Photo 2 - Pit-1 looking west
Rad-1 - Pit-1, 0m - 96 ~~uR/h~~; 1m - ~~98~~ 37 ALT mR/h

Pit-2 - 6' deep, 25' long, 25' wide - Exploration pit
Photo 3 - Pit-2 looking west
Rad-2 - Pit-2, 0m - ~~45~~ 45 ALT mR/hr, 1m - 39 mR/hr



Photo 4 - Pit-2, looking south

PileRidge-1; east of pit-1 and pit 2
3' high, 35' long, 15' wide
Photos 5-7 - PileRidge-1, looking west, south, north

Rad-3, PileRidge-1; 0m - 40 mR/hr; 1m - 33 mR/hr

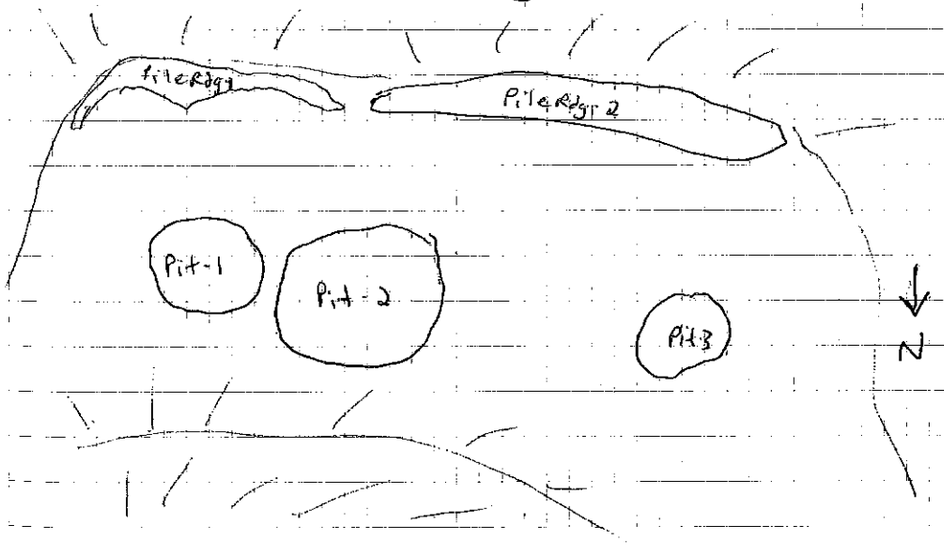
PileRidge-2; south of pit-1 and pit-2
6' high; 65 ~~0~~ 5 ALT' long; 20' wide
Photos 8-10 - PileRidge-2; looking west, south, north

Rad-4 - PileRidge-2; 0m - 43 mR/hr; 1m - 32 mR/hr

Pit-3 - west of pit-2; 3' deep, 6' wide, 8' long
Photos 11-12 - Pit3; looking south

Rad-5 - Pit3 - 0m - 44 mR/hr, 1m - 32 mR/h

Photo 13 - photopt 2; looking south at site



Photos 14-22 - Vegetation and wildlife

Photos 23-24 - Vegetation

940

Pit-4 - south-southwest of DistPly-1
4' deep, 15' long, 10' wide; water in the bottom
Photo 25 - Pit-4, looking south

Rad 6 - Pit-4; 0m - 30 uR/hr; 1m - 26 uR/hr

955

Pit 5 - 2' deep, 12' wide, 10' long; south of Pit 4, water
Photo 26 - Pit 5 - looking west
Rad 7 - Pit 5 - 0m - 30 uR/hr; 1m - 26 uR/hr

CutIn-1 - south of Pit 5; 4' deep; 12' wide, 18' long
Photo 27 - cutIn1, looking north
Rad 8 - CutIn; 0m - 32 uR/h; 1m - 26 uR/h

Pit 6 - south cutIn1; 7' deep, 5' long, 10' wide
Photo 28 - Pit 6, looking south
Rad 9 - Pit 6; 0m - 38 uR/hr, 1m - 30 uR/hr

Photo 29 - Metal tag in Pit 6, "73225", photo pt 3

PilePly-1 - between CutIn 1 and Pit 6; "L" shaped
5' high; 20' wide, 25' length
Photo 30 - PilePly-1; looking northwest
Rad 10 - PilePly-1; 0m - 30 uR/h, 1m - 28 uR/h

ALT
~~Fence1n~~
Gate1n-1 - barbed wire fence
Photo 31 - looking west along fence



* Line distance seems off
CutIn-2; 3' deep; 7' wide, 6' long; south Pit-6
Photo 32 - looking north in CutIn-2

Rad 11 - CutIn2 - 0m - 41 uR/hj 1m - 31 uR/h

Pit-7; South cutIn2; 2' deep, 7' wide, 10' long
Photo 33 - looking south, at Pit 7
~~Rad 12~~ ALT ALT west
Pit-7 may have been filled in

Rad 12 - Pit 7 - 0m - ~~97~~ 70 ALT uR/h; 1m - 41 uR/h

Photo 34 - metal tag in Pit 7 "73224", photo pt 4

Photo 35 - metal tag in Pit 7 "41481", photo pt 5

1040

DistPly 2 - Disturbed area includes 3 pits, 1 cutIn, piles of waste rock

Photo 36 - metal tag at edge of DistPly 2, tag attached to loose rock, "41480", photo pt 6

Rad 13 - photo pt 6; 0m - 40 uR/h; 1m - 32 uR/h

Pit 8 - south of Pit 7; 5' deep, 15' long, 6' wide
Photo 37 - Pit 8 - looking north
Photo 38 - Pit 8 - looking northeast

Rad 14 - Pit 8; 0m - 150 uR/h; 1m - 40 uR/h

Rad 15 - south end of DistPly 2; 0m - ~~96~~ 60 ALT uR/hj 1m - 43.4 uR/h

1100

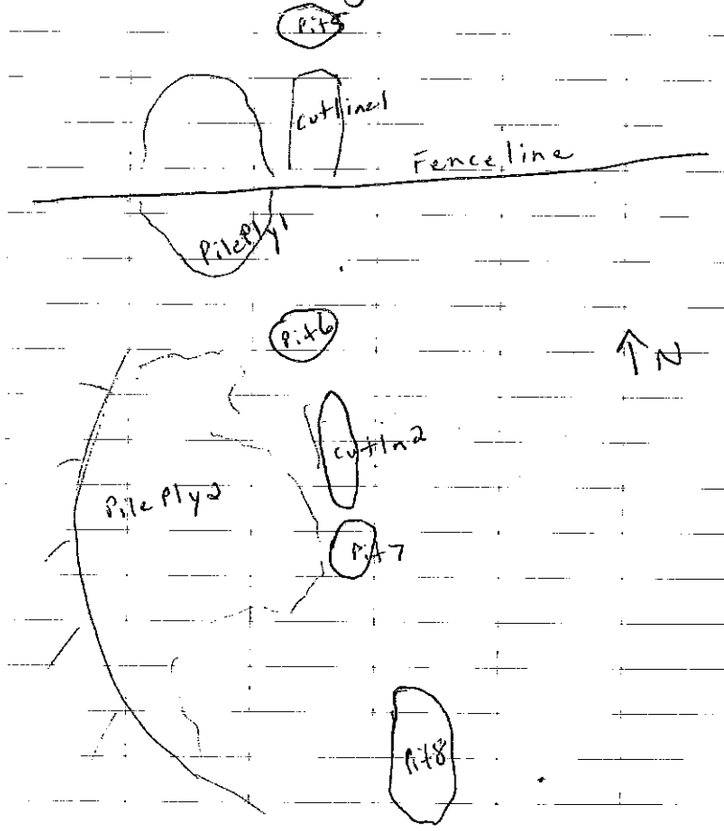
PilePly2 - Waste rock associated with Cutln 2, Pit 7, and Pit 8; 5' high, 25' wide, 50' long

Photo 39 - PilePly 2, looking north
Photo 40 - PilePly 2, looking south ALT

Rad 16 - PilePly 2; 0m - 110 uR/h; 1m - 70uR/h

Photo 41 - Site location with name, photo pt 7 looking northeast; DistPly2

Photos 42-45 - Vegetation






1200 At location given for AUM Disturbed Polygon
Rad Back 2 - given AUM Disturbed Poly
0m - 30 uR/h, T ALT 1m - 25uR/h
Photo 46 - of given AUM location

1220 Offsit claims "W claims, LM #74"
Photo 47 - looking west at W. claim

Soils: Rocky, thin soils. Red-tan sandy, lots of exposed bedrock.

Rocks: Limestone outcrops with veins of secondary mineralization. Malachite, copper deposits

Human Activities: Evidence of cattle grazing, cow pies, cow prints. Fences and cattle ~~guards~~ ALT guards.

Wildlife: Redtail hawk, cotton tail rabbit, mountain bluebird. Scrub oak (?), juniper, cholla, prickley pear cactus, blue grama grass, other grasses. Deer tracks.